

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for curing a fluorine-containing polymer having a structure of the formula:

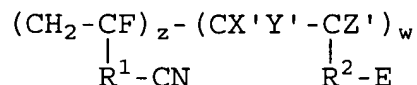


wherein R represents a straight or branched fluorinated alkylene group having 1 to 20 carbon atoms which optionally contains an oxygen atom; x and y represent mole percentages and x is from 1 to 100 % by mole; A is -CN, -NCO, -COOR' in which R' is a hydrogen atom or an alkyl group having 1 to 10 carbon atoms, or A is an acid anhydride group or A is an unsaturated hydrocarbon group; and M is a repeating unit derived from a copolymerizable monomer;

wherein the method comprises treating said polymer with ammonia and crosslinking said polymer through the side functional groups of said polymer.

2. (Previously Presented) The method according to claim 1, wherein the cross-linked polymer is further heated at a temperature of at least 100°C.

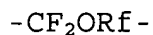
3. (Previously Presented) A method for curing a fluorine-containing polymer having a structure of the formula:



wherein X', Y' and Z' represent independently from each other a hydrogen atom, a fluorine atom, a chlorine atom, a bromine atom or an iodine atom; R¹ and R² represent independently from each other a straight or branched fluorinated alkylene group having 1 to 20 carbon atoms which optionally contains an oxygen atom; z and w represent mole percentages and z is from 1 to 100 % by mole; and E is -NCO, -COOR' in which R' is a hydrogen atom or an alkyl group having 1 to 10 carbon atoms, an acid hydride group, an unsaturated hydrocarbon group, a straight or branched alkyl group having 1 to 20 carbon atoms in which a part or all of the hydrogen atoms are optionally substituted with a chlorine atom or a fluorine atom or the alkyl group optionally contains an oxygen atom;

wherein the method comprises curing said polymer in the presence of a base.

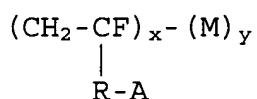
4. (Previously Presented) The method according to claim 3, wherein R¹ is a group of the formula:



wherein Rf is a fluorinated alkylene group having 1 to 20 carbon atoms.

5. (Previously Presented) The method according to claim 3 or 4, wherein said cured polymer is further heated at a temperature of at least 100°C.

6. (Previously Presented) A method for curing a fluorine-containing polymer having a structure of the formula:



wherein R is a group of the formula: $-\text{CF}_2\text{ORf}-$ in which Rf is a fluorinated alkylene group having 1 to 20 carbon atoms which may contain an oxygen atom; x and y represent mole percentages and x is from 1 to 100 % by mole; A is $-\text{CN}$, $-\text{NCO}$, $-\text{COOR}'$ in which R' is a hydrogen atom or an alkyl group having 1 to 10 carbon atoms, or A is an acid anhydride group or A is an unsaturated hydrocarbon group; and M is a repeating unit derived from a copolymerizable monomer;

wherein the method comprises treating said polymer with at least one compound selected from the group consisting of ammonia, diamines and polyol compounds and crosslinking said polymer through the side functional groups of said polymer.

7. (Previously Presented) The method according to claim 6, wherein said cured polymer is further heated at a temperature of at least 100°C.

8. (New) The method according to claim 1, wherein M is selected from the group consisting of vinylidene fluoride, tetrafluoroethylene, hexafluoropropylene, chlorotrifluoroethylene, vinyl fluoride, trifluoroethylene, tetrafluoropropylene, trifluoropropylene, ethylene, and propylene.

9. (New) The method according to claim 3, wherein M is selected from the group consisting of vinylidene fluoride, tetrafluoroethylene, hexafluoropropylene, chlorotrifluoroethylene, vinyl fluoride, trifluoroethylene, tetrafluoropropylene, trifluoropropylene, ethylene, and propylene.

10. (New) The method according to claim 6, wherein M is selected from the group consisting of vinylidene fluoride, tetrafluoroethylene, hexafluoropropylene, chlorotrifluoroethylene, vinyl fluoride, trifluoroethylene, tetrafluoropropylene, trifluoropropylene, ethylene, and propylene.